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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.       | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------|------------------|
| 09/802,924   | 03/12/2001  | Fu-Sheng Chen        | 06484.0070                | 1250             |
| 22852  | 7590        | 11/24/2003           | EXAMINER<br>NGUYEN, DANNY |                  |
| FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER<br>LLP<br>1300 I STREET, NW<br>WASHINGTON, DC 20005 |             |                      | ART UNIT<br>2836          |                  |
|  |             |                      | PAPER NUMBER              |                  |

DATE MAILED: 11/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/802,924             | CHEN, FU-SHENG      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Danny Nguyen           | 2836                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133)
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-9 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9 and 17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
     a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other.

**DETAILED ACTION**

1. Claims 2, 10-16 are cancelled.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Satoh (USPN 6,435,798). Satoh discloses a method of maintaining a lift structure of a chuck wafer (fig. 3) that supports a semiconductor wafer (3) comprises providing a removable lift pin (first pin 11), removing the first pin (the first lift pin 11) to the lift base (lift base 9), mounting a second pin (a second lift pin 11) to the lift base (see col. 8, lines 53-67).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-6, 9, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tepman (USPN 5,951,775) in view of Satoh (USPN 6,435,798).

Regarding to claims 1, 5, Tepman discloses a chuck system for supporting a semiconductor wafer (see fig. 1 and 2) comprises a chuck platform (16) for supporting

the semiconductor wafer, lift structure (see fig. 2) movably coupled to the platform to receive the wafer (14), including a lift base (shown in fig. 2) and at least one lift pin (30) removably coupled to the base, the lift pin having two ends with a first end removably coupled to the base and the second end coupled for supporting the wafer during operation of the lift structure, wherein the first lift pin is threaded. Tepman does not disclose the lift base has a thread hole. Satoh discloses an example of plasma process has a lift base (9) with a thread hole (32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have placed the lift base of Tepman with a lift base having a thread hole as taught by Satoh in order to improve productivity, and time required for maintenance can be shortened (Satoh, col. 8, lines 63-67).

Regarding to claim 3, Tepman disclose the system comprises a bolt (shown in fig. 2), wherein the first end of the lift pin (first pin 30) is threaded and the bolt removably couples the lift pin with the base through an opening provided by the lift base.

Regarding to claims 4, 9, Tepman discloses the lift structure comprises a plurality of pins (30) coupled to the lift base and the lift base is flat and provides one opening for receiving the pins (30) (see fig. 2).

Regarding to claim 6, Tepman discloses the chuck system is an electrostatic chuck system (fig. 2).

Regarding to claim 19, Tepman discloses that the chuck system comprises a driving mechanism (driving mechanism 18) for driving the lift structure, the lift base having at least one mounting hole to mount the lift structure to the driving mechanism,

wherein the mounting hole being positioned closer to the center of the lift base than the lift pin (shown in fig. 2).

4. Claims 7, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tepman in view of Satoh, and further in view of Morita et al. (USPN 5,815,366). Tepman and Satoh disclose all limitations of claim 1 except for having the lift pin connected to ground when the lift receives the wafer. Morita et al. disclose the lift pin connected to ground (ground circuit 30 shown in fig. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the circuit of Tepman and Satoh with a ground circuit as taught by Morita et al. in order to discharge electrostatic on the wafer during lifting operation.

#### ***Response to Arguments***

5. Applicant's arguments filed 10/17/2003 have been fully considered but they are not persuasive.

Applicant's arguments, see Remark, filed 10/17/2003, with respect to the rejection(s) of claim(s) 1 and 17 under 102 (b) have been fully considered and are persuasive. Therefore, the final rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Satoh (USPN 6,435,798)

#### ***Conclusion***


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Nguyen whose telephone number is (703)-305-5988. The examiner can normally be reached on Mon to Fri 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703)-308-3119. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9318 for regular communications and (703)-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

DN

DN  
November 6, 2003



BRIAN SIRCUS  
SUPERVISOR, EXAMINER  
IN CHARGE, EXAMINER  
IN CHARGE, EXAMINER